

Docket No. 239042US0X

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Hans-Peter KRIMMER, et al.

SERIAL NO: 10/656,220

GAU:

FILED: September 8, 2003

EXAMINER:

MOLECULAR WEIGHT-ENLARGED LIGANDS FOR ASYMMETRIC, HOMOGENEOUSLY SOLUBLE HYDROGENATION CATALYSTS, PROCESS FOR THE PRODUCTION THEREOF AND USE

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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**LIST OF RELATED CASES**

<u>Docket Number</u>	<u>Serial or Patent Number</u>	<u>Filing or Issue Date</u>	<u>Inventor/ Applicant</u>
201072US0X	6,617,480	09/09/03	KRIMMER, et al.
201078US0X	6,624,248	09/23/03	BURKHARDT, et al.
239042US0X*	10/656,220	09/08/03	BOMMARIUS, et al.

\*Present Application; listed for information  
NFO/amr

Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

SERIAL NO.

239042US0X

10/656,220

APPLICANT

Hans-Peter KRIMMER, et al.

FILING DATE

September 8, 2003

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,777,062	07/07/98	PUGIN			
	AB	4,605,570	08/12/86	KUMOBAYASHI ET AL			
	AC	4,634,775	01/06/87	BECK ET AL			
	AD	6,087,481	07/11/00	REETZ ET AL			
	AE	4,424,312	01/03/84	STILLE			
	AF	4,695,631	09/22/87	OTSUKA ET AL			
	AG	5,043,474	08/91	MULLER ET AL			
	AH	5,990,318	11/99	CHAN ET AL			
	AI	6,348,620	02/02	KNOCHEL ET AL			
	AJ	6,284,925	09/04/01	KNOCHEL ET AL			
	AK	6,534,657	03/03	ZHANG			
	AL	6,617,480	09/09/03	KRIMMER ET AL			
	AM	6,624,248	09/23/03	BURKHARDT ET AL			
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
/	AO	WO 98/22415	05/28/98	WIPO (w/English Abstract)		
/	AP	DE 197 30 657 A1	06/04/98	GERMANY		
/	AQ	WO 98/12202	03/26/98	WIPO		
	AR	WO 99/62855	12/09/99	WIPO		
/	AS	0 592 881	04/20/94	EUROPE		
/	AT	196 47 892	06/04/98	GERMANY		X
/	AU	0 729 969	09/04/96	EUROPE		
/	AV	2 634 209	01/19/90	FRANCE		X

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

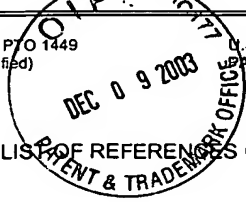
AW	G. Bell et al, Engineering Processes for Bioseparations, 1994, pp. 135-165.
AX	Udo KRAGL et al, Applied Homogeneous Catalysis with Organometallic Compounds, 1996, pp. 832-843.
AY	Ryoji NOYORI, Asymmetric catalysis in organic synthesis, 1994, pp. 122-254.
AZ	Ryoji NOYORI et al, Asymmetric Transfer Hydrogenation Catalyzed by Chiral Ruthenium Complexes, Acc. Chem. Res., 1997, 30, pp. 97-102.

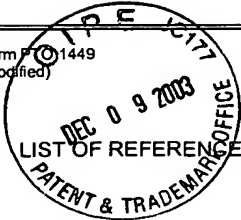
☐ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT		ATTY DOCKET NO.	SERIAL NO.
		239042US0X	10/656,220
		APPLICANT	
		Hans-Peter KRIMMER, et al.	
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)			
AAA	Dennis J. GRAVERT et al, Soluble Supports Tailored for Organic Synthesis: Parallel Polymer Synthesis via Sequential Normal/Living Free Radical Processes, J. Am. Chem. Soc., 1998, 120, pp. 9481-9495.		
AAB	Eberhard STECKHAN et al, Kontinuierliche Erzeugung von NADH aus NAD und Formiat mit einem molekulargewichtsvorgoesserten Homogenkatalysator in einem Membranreaktor, Angew. Chem., 1990, 102, Nr. 4, pp. 445-447.		
AAC	Manfred T. REETZ et al, Synthese und katalytische Wirkung von dendritischen Diphosphan-Metallkomplexen, Angew. Chem., 1997, 109, Nr. 13/14, pp. 1559-1562		
AAD	Dieter SEEBACH et al, Polymer- and Dendrimer-Bound Ti-TADDOLates in Catalytic (and Stoichiometric Enantioselective Reactions: Are Pentacoordinate Cationic Ti Complexes the Catalytically Active Species?, Helvetica Chimica Acta, 1996, Vol. 79, pp.1710-1740.		
AAE	Udo KRAGL et al, Kontinuierliche asymmetrische Synthese in einem Membranreaktor, Angew. Chem., 1996, 108, Nr. 6, pp. 684-685.		
AAF	Fritz KELLER et al, Chiral Polysiloxane-Fixed Metal 1,3-Diketonates (Chirasil-Metals) as Catalytic Lewis Acids for a Hetero Diels-Alder Reaction-Inversion of Enantioselectivity Upon Catalyst-Polymer Binding, Chem. Ber./Recueil, 1997, 130, pp. 879-885.		
AAG	Carsten BOLM et al, Asymmetrische Dihydroxylierung mit Polyethylenglycolmonomethylether-gebundenen Liganden, Angew. Chem. 1997, 109, Nr. 7, pp. 773-775.		
AAH	Carsten BOLM et al, Polymer-Supported Catalytic Asymmetric Sharpless Dihydroxylations of Olefins, Eur. J. Org. Chem, 1998, pp. 21-27.		
AAI	Alessandro MANDOLI et al, A first example of macromolecular Ti(IV) Lewis acid in the catalytic enantioselective Mukaiyama reaction, Tetrahedron: Asymmetry, 1998, 9, pp. 1479-1482.		
AAJ	Juliane BELICZEY et al, Novel ligands derived from S-tyrosine for the enantioselective addition of diethylzinc to aldehydes, Tetrahedron: Asymmetry, 1997, Vol. 8, No. 10, pp. 1529-1530.		
AAK	Marcel FELDER et al, A polymer-enlarged homogeneously soluble oxazaborolidine catalyst for the asymmetric reduction of ketones by borane, Tetrahedron: Asymmetry, 1997, Vol. 8, No. 12, pp. 1975-1977.		
AAL	Christoph KOELLNER et al, Dendrimers Containing Chiral Ferrocenyl Diphosphine Ligands for Asymmetric Catalysis, J. Am. Chem. Soc., 1998, 120, pp. 10274-10275.		
AAM	Filippo MINUTOLO et al, Polymer-Bound Chiral(Salen)Mn(III) Complex as Heterogeneous Catalyst in Rapid and Clean Enantioselective Epoxidation of Unfunctionalised Olefins, Tetrahedron Letters, 1996, Vol. 37, No. 19, pp. 3375-3378.		
AAN	Torsten MALMSTROEM et al, A novel chiral water-soluble phosphine ligand based on a water-soluble acrylic acid salt, Chem. Commun., 1996, pp. 1135-1136.		
AAO	Dennis J. GRAVERT et al, Organic Synthesis on Soluble Polymer Supports: Liquid-Phase Methodologies, Chem. Rev., 1997, 97, pp. 489-509.		
AAP	K.E. GECKLER et al, Soluble Polymer Supports for Liquid-Phase Synthesis, Advances in Polymer Science, 1995, vol. 121, pp. 31-79.		
AAQ	Georg HOCHWIMMER et al, 6,6'-Bisfunctionalized 2,2'-bipyridines as metallo-supramolecular initiators for the living polymerization of oxazolines, Macromol. Rapid Commun., 19, 1998, pp. 309-318.		
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<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
—	AO	EP 0 965 574	12/22/99	EUROPE (w/English Abstract)			
—	AP	DE 199 21 924	12/23/99	GERMANY (w/English Abstract)			
—	AQ	JP2000-053593	02/22/00	JAPAN (w/English Abstract)			
—	AR	JP2000-143684	05/26/00	JAPAN (w/English Abstract)			
—	AS	DE 199 56 374	06/21/00	GERMANY (w/English Abstract)			
—	AT	0 877 029	11/11/98	EUROPE			
	AU						
	AV						
<b>OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	AW	Matthew J. PALMER et al, Asymmetric transfer hydrogenation of C=O and C=N bonds, Tetrahedron: Asymmetry, 10, 1999, pp. 2045-2061.					
	AX	Sebastian RISSOM et al, Asymmetric reduction of acetophenone in membrane reactors: comparison of oxazaborolidine and alcohol dehydrogenase catalysed processes, Tetrahedron: Assymetry, 1999, 10, pp. 923-928.					
	AY	Iwao OJIMA , The Chemistry of Organic Silicon Compounds, 1989, pp.1479-1526.					
	AZ	Stephen J. SHUTTLEWORTH et al, Functionalised Polymers: Recent Developments and New Applications in Synthetic Organic Chemistry, Synthesis, 1997, pp.1217-1239.				<input type="checkbox"/> Additional References sheet(s) attached	
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